CITY OF CHULA VISTA

CLIMATE ACTION PLAN
Implementation Progress Report
November 2012

SUMMARY

Since 2000, Chula Vista has been implementing a "Climate Action Plan" to address the threat of climate change to the local community. Over the past 3 years, this original plan has been revised to incorporate new climate mitigation (2008) and adaptation (2011) measures to strengthen the City's climate action efforts and to facilitate the numerous community co-benefits such as utility savings, better air quality, reduced traffic congestion, local economic development, and improved quality of life. Based on available funding, staff has been implementing the 18 climate-related actions and their 57 associated components. To date, most of the components have been successfully completed, are being implemented on an ongoing basis, or are being actively pursued. Only three components remain on-hold due to funding shortages

BACKGROUND

Since the early 1990s, Chula Vista has been engaged in multiple climate change forums including the United Nations Framework Convention on Climate Change, the ICLEI Cities for Climate Protection campaign, the California Climate Action Registry, and the U.S. Conference of Mayor's Climate Protection Agreement and has committed to reduce its greenhouse gas (GHG) emissions 20% below 1990 levels. To accomplish this GHG reduction or climate "mitigation" goal, the City adopted a Carbon Dioxide (CO2) Reduction Plan in 2000, which outlined steps for Chula Vista to reduce energy and fuel use at municipal facilities and throughout the community. In 2008, seven new climate mitigation measures were adopted by City Council to augment past efforts by improving energy and water efficiency, expanding renewable energy systems, converting to more fuel efficient and alternative fuel vehicles, and designing transit-friendly, walkable communities. To complement these climate mitigation actions, City Council adopted eleven strategies in May 2011 to reduce Chula Vista's vulnerability to expected local climate change impacts (known as climate "adaptation"). These strategies addressed expected impacts such as hotter and drier weather, diminished imported water supplies, more poor air quality/heat wave days, more frequent wildfires, shifts in habitat and species distribution, and increased rates of sea level rise. By minimizing the risks associated with climate impacts now, future costs and public health concerns can be avoided and/or minimized.

IMPLEMENTATION PROGRESS

The following report outlines the implementation progress for the 7 climate mitigation measures and the 11 climate adaptation strategies. In addition to background information and next steps, staff has highlighted whether the implementation is:

Completed – All required implementation steps have been completed

Ongoing – All required initial steps have been completed, but component is still actively being implemented

In Progress – Implementation steps are still being developed and pursued based on the original implementation plan

On-Hold **–** Implementation has not proceeded due to a programmatic barrier (such as funding)

As directed by City Council, staff has been implementing the 18 climate-related actions and their 57 associated components based on available funding. Out of the 27 mitigation-related components, 75% and 22% have been successfully completed/ongoing or are still being actively pursued, respectively. Only the H Street Corridor Study (under Mitigation Measure #6) is currently "On-Hold" due to the dissolution of the City's Redevelopment Agency. Out of the 30 adaptation-related components, 47% and 47% have been successfully completed/ongoing or are still being actively pursued, respectively. There are two components dealing with biological monitoring (under Adaptation Strategies #8 & #9) that remain "On-Hold."

Staff continues to proactively seek new funding resources to support full implementation. Chula Vista submitted a $3.1 million proposal to San Diego Gas & Electric (SDG&E) to continue and expand its Local Government Partnership, which will be considered by the California Public Utilities Commission in November. The City, in coordination with the California Statewide Communities Development Authority, successfully launched a voluntary Property-Assessed Clean Energy (PACE) program for commercial buildings in late September. PACE allows commercial property-owners in Chula Vista to easily finance energy efficiency, renewable energy, and water conservation improvements and repay the debt service through their biannual property tax payments. Finally, Chula Vista secured federal funding through the Department of Energy's SunShot Initiative (as part of the "Southern California Rooftop Solar Challenge" proposal) to identify local barriers to solar photovoltaic installations. Over the next 6 months, staff will be pursuing a variety of new initiatives to more effectively facilitate rooftop solar installations such as a centralized "all things solar" webpage, revised solar array zoning guidance, and a community volunteer event to help low-income families receive free solar photovoltaic systems.

Since the last progress report, the City of Chula Vista, in partnership with the City of San Diego, County of San Diego, Port of San Diego, and San Diego Association of Governments (SANDAG), has officially launched the "San Diego Regional Climate Collaborative." The Climate Collaborative, and its associated website (www.sdclimatecollaborative.org) and brand identity, will serve as a means to increase local, statewide, and national awareness of the San Diego region's leadership in addressing climate change issues and promoting sustainable development. Finally, SANDAG and the California Center for Sustainable Energy completed an independent analysis of the City's alternative fuel and transportation programs and policies. The resulting "Clean Transportation Energy Roadmap" will help Chula Vista implement a variety of sustainable transportation initiatives.

CLIMATE MITIGATION MEASURES

The following (7) measures are designed to reduce greenhouse gas or "carbon" emissions from municipal operations and the broader Chula Vista community. The measures complement one another as well as state and federal climate mitigation initiatives.

MITIGATION MEASURE #1
CLEAN VEHICLE REPLACEMENT POLICY FOR CITY FLEET

Overview

Measure #1 directs the City to require that 100% of the replacement vehicles purchased for the municipal fleet be high efficiency (hybrid) or alternative fuel vehicles (AFVs). However, factors such as the appropriateness for the vehicle task, fueling infrastructure, petroleum displacement, and the overall cost and environmental benefit must be considered prior to purchasing each replacement vehicle.

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE MITIGATION MEASURE #1: 100% City-Fleet Replacement with AFVs	1	Design and construction of a 12,000-gallon biodiesel tank at PWC	Completed	City's 128 diesel-fueled vehicles (or 23% of the total fleet) has been converted to biodiesel.
	2	Replace City's-fleet with AFVs or hybrids	Ongoing	Over 30% of City's total motorized fleet is now operating on alternative fuels or is using hybrid technology.

Next Steps

City vehicles will be replaced with hybrids or AFVs on an ongoing basis, as appropriate funding becomes available. For Fiscal Year 2013, two additional wastewater vehicles and four additional general Public Works vehicles will be replaced with either hybrid or alternative fuel technologies. Future alternative vehicle efforts will also be informed by the recent Clean Transportation Energy Roadmap completed by SANDAG and the California Center for Sustainable Energy on behalf of the City of Chula Vista.

MITIGATION MEASURE #2
CLEAN VEHICLE REPLACEMENT FOR CITY-CONTRACTED FLEETS

Overview

Measure #2 directs staff to work with fleets under City authority to influence their expanded use of alternative fuels and high efficiency/alternative fuel vehicles (AFV) including electric, biodiesel, ethanol, hybrid, hydrogen, and compressed natural gas (CNG) based on appropriateness for vehicle task, fueling infrastructure, petroleum displacement, overall cost, and environmental benefit.

CLIMATE MITIGATION MEASURE #2: 100% City-Contracted Clean Fleets	#	COMPONENTS	STATUS	PROGRESS
	1	Convert Chula Vista Transit to alternative fuels and/or high efficiency vehicles	Completed	100% of Chula Vista Transit fleet have been converted to AFV.
	2	Convert Solid Waste Hauler to alternative fuels and/or high efficiency vehicles	Completed	100% of Allied Waste fleet have been converted to AFV.
	3	Convert Street Sweeper to alternative fuels and/or high efficiency vehicles	In Progress	Staff is working with the currently contracted vendor to investigate more affordable AFV technologies.
	4	Convert City-contracted Tow Trucks to alternative fuels and/or high efficiency vehicles	In Progress	A new RFP for Tow Truck service, which includes hybrid/AFV requirements, has been finalized and is scheduled to be released in the near future.
	5	Open publicly-available CNG dispenser at PWC	Completed	The new public CNG fuel station has dispensed almost 44,100 gallons (equivalent) since October 2011.

Next Steps

The City continues to work with contractors and community partners to promote local alternative fuel use and infrastructure, which will be informed by the recent Clean Transportation Energy Roadmap completed by SANDAG and the California Center for Sustainable Energy. City staff is currently seeking full-service vendors to install, operate, and maintain a network of electric vehicle charging stations at City-owned facilities and parking lots. In addition, staff is investigating the expansion of electric vehicle car sharing programs into Chula Vista.

MITIGATION MEASURE #3
BUSINESS ENERGY EVALUATIONS

Overview

The measure, as revised by City Council, states that businesses with storefronts or offices need to participate in a no-cost energy and water evaluation of their premises when a new business license is issued or once every 3-5 years for a renewed business license. The measure helps businesses identify efficiency opportunities at their facilities, access rebates and financing for efficiency improvements, and lower their monthly utility costs. Businesses are not required to implement any of the identified energy or water efficiency opportunities and are not required to complete evaluations for facility areas beyond their operational control (ex. whole-building systems operated and maintained by a Property Manager/Landlord).

CLIMATE MITIGATION MEASURE #3: Business Energy Evaluations	#	COMPONENTS	STATUS	PROGRESS
	1	Develop ordinance integrating energy & water evaluations into business licensing process	Completed	CVMC Chapter 20 was revised to include the evaluations, known as the "Free Resource & Energy Business Evaluations" (FREBE) program.
	2	Complete onsite energy & water evaluations for businsesses annually	Ongoing	In 2012, 662 on-site evaluations have been completed to identify utility cost saving opportunities.
	3	Link businesses, who are interested in pursuing efficiency improvements, to available rebates, incentives, & financing	Ongoing	Through the FREBE program, over 441 businesses (or 67% of 'completed' evaluations) received free water-saving aerators, smart power strips, HVAC maintenance, CFLs, or other efficiency upgrades in 2012.
	4	Report to City Council on collected fines from non-compliant businesses	Ongoing	In 2012, only 3 businesses (out of 1,298) have been non-compliant and will receive a $15 fine on their 2013 license renewal.

Next Steps

San Diego Gas & Electric has approved funding continuance for the Free Resource & energy Business Evaluation program as part of the City's 2013-2014 Local Government Partnership. The Local Government Partnership will continue to provide critical funding and resources to assist local businesses in reducing their energy use and costs. Since its inception, the program continues to have approximately 94% of businesses (based on participant surveys) state that they would refer the FREBE program to another business.

MITIGATION MEASURE #4
GREEN BUILDING STANDARD

Overview

Measure #4 directed staff to adopt regulations mandating new and renovated residential and non-residential projects to incorporate early the requirements of the Housing and Community Development's California Green Building Standards Code (CalGreen) and to be more energy efficient than the 2008 Building Energy Efficiency Standards (Title 24) by a specific percentage. In addition, the measure directed staff to implement a green building awareness program and update/establish design and regulatory provisions that incorporate sustainable practices at a community-scale.

CLIMATE MITIGATION MEASURE #4: Green Building Standard	#	COMPONENTS	STATUS	PROGRESS
	1	Adopt a citywide Green Building Standard	Completed	In fall 2009, the City adopted the 2010 CA Green Building Standards Code early with local amendments. In fall 2011, a voluntary Green Building Plus program offering expedited permitting was launched.
	2	Adopt a citywide Enhanced Energy Efficiency Standard	Completed	In fall 2009, the City adopted an Enhanced Energy Efficiency Code. To date, 962 new residential and 16 new commercial units have complied with the new code.
	3	Launch a Green Building Awareness program for builders, permit applicants, & the general public	Ongoing	Through a federal grant, the City has identified ways to better facilitate and streamline rooftop solar photovoltaic permitting and zoning.
	4	Develop design guidelines for sustainable development	Completed	In 2011, the City incorporated sustainability criteria into its updated Air Quality Improvement Plan Guidelines and Design Manual for large and small-scale development, respectively.

Next Steps

City staff will be implementing a variety of "best practices" to help promote rooftop solar photovoltaic system permitting and zoning as part of the federally-funded Southern California Rooftop Solar Challenge. City staff will also be revising its Enhanced Energy Efficiency standard in 2014, as needed, when the new statewide Title-24 code is revised.

MITIGATION MEASURE #5
SOLAR & ENERGY EFFICIENCY CONVERSION PROGRAM

Overview

The "Solar & Energy Efficiency Conversion" program was recommended to help facilitate energy efficiency and renewable energy retrofits in the community and at municipal facilities. The community component, called the *Home Upgrade, Carbon Downgrade* program, is intended to help the average resident and small business overcome common institutional barriers, upfront capital costs, complicated application processes, and time constraints. The program also strives to promote local job creation and economic development by linking community participants with local contractors and vendors. Finally, Measure #5 included the implementation of a pre-wiring and pre-plumbing requirement for solar photovoltaic (PV) and solar hot water systems, respectively, in all new residential units.

CLIMATE MITIGATION MEASURE #5: Solar & Energy Efficiency Conversions	#	COMPONENTS	STATUS	PROGRESS
	1	Implement a Solar & Energy Efficiency Conversion program for the community	Ongoing	With federal stimulus funds, the City's *Home Upgrade, Carbon Downgrade* program has improved approximately 400,000 sf of residential space to lower energy use and costs.
	2	Upgrade municipal facilities with energy efficiency & solar energy technologies	Ongoing	With the recent completion of design work, staff hopes to secure financing to convert over 2,000 arterial streetlights to LED technology by December 2012.
	3	Link conversion program to local economic development	Ongoing	Through the *Home Upgrade, Carbon Downgrade* program, over $3.9 million in sales have been generated at local appliance stores benefitting the Chula Vista economy.
	4	Adopt pre-wiring and pre-plumbing standards for solar pv & solar hot water, respectively	Completed	In 2009, the City adopted the "solar ready" ordinances. To date, 1,390 new residential units have complied with the new code.

Next Steps

The City included additional funding for its *Home Upgrade, Carbon Downgrade* program in its 2013-2014 SDG&E Local Government Partnership proposal. Potential program components include streamlined permitting, workforce training, and home energy ratings in order to further facilitate energy retrofits in the community. Within the next two months, City staff also plans to release a Request for Proposals to pursue a residential-focused Property Assessed Clean Energy (PACE) program to help finance home retrofits.

MITIGATION MEASURE #6
SMART GROWTH AROUND TROLLEY STATIONS

Overview

Measure #6 is intended to accomplish the remaining planning groundwork necessary to support realization of the "Smart Growth" development densities and intensities envisioned in both the General Plan and the Urban Core Specific Plan (UCSP). Specifically, the measure's four components are focused on the areas surrounding the E Street, H Street, and Palomar Street trolley stations.

CLIMATE MITIGATION MEASURE #6: Smart Growth Around Trolley Stations	#	COMPONENTS	STATUS	PROGRESS
	1	Implementation of UCSP around E Street Trolley Station	In Progress	Staff is continuing to work with property owners and other interested parties towards project options for E Street parcels, and will apprise the City Council when viable prospects are identified.
	2	Initiate a H Street Corridor Study to better define redevelopment opportunities around the Trolley Station	On-Hold	Due to the dissolution of redevelopment agencies statewide, the H Street Corridor Study is on-hold indefinitely until alternative funding sources are identified.
	3	Develop a specific plan for the Palomar Gateway area, including the Palomar Trolley Station	In Progress	City is currently working to complete the specific plan and its related environmental documents for City Council consideration in early 2013.
	4	Pursue trolley grade separation along the I-5 corridor	In Progress	In coordination with SANDAG and CalTrans, a consultant has been engaged to conduct a grade separation design study to be completed in December 2012.

Next Steps

The City will continue to pursue "Smart Growth" development surrounding Chula Vista's three trolley stations. Specifically, staff will work with CalTrans and SANDAG to complete project design and to secure funding for trolley grade separation. In addition, the City will continue to pursue project options for the E St. Station area properties and to identify alternative funding opportunities for the H Street Corridor Study.

MITIGATION MEASURE #7
TURF LAWN CONVERSION PROGRAM

Overview

Because water movement and treatment requires a large amount of energy (leading to GHG emissions), Measure #7 helps residents and businesses replace turf lawn areas with "WaterSmart" landscaping. Specifically, the program's components include (1) continuation and expansion of the NatureScape program to promote water conserving and nature-friendly landscaping, (2) coupling of residential and business turf lawn replacement with the solar and energy efficiency conversion program (Measure #5), (3) converting select municipal facilities to low water use plantings and irrigation, and (4) updating various municipal landscape regulations and guidelines to comply with new state requirements and further promote outdoor water use efficiency.

CLIMATE MITIGATION MEASURE #7: Turf Lawn Conversion	#	COMPONENTS	STATUS	PROGRESS
	1	Expand the NatureScape outreach program	Ongoing	Through the program, over 200 residents have attended "NatureScape-In-A-Box" workshops contributing to the City's 430 total certified "Backyard Wildlife Habitats."
	2	Include turf lawn replacement in *Home Upgrade, Carbon Downgrade* program (Measure #5)	In Progress	While current federal funding for the *Home Upgrade, Carbon Downgrade* program can not be used for turf conversions, staff is pursuing residential PACE financing to support the effort.
	3	Convert municipal facilities to low water use plantings & irrigation	Ongoing	The City has initiated turf replacement projects at both Energy Upgrade Demonstration Homes on Ash Avenue and Fig Avenue.
	4	Update landscaping ordinances to emphasize water use efficiency	Completed	In 2010, a revised Landscape Water Conservation Ordinance was approved by City Council that creates a water budget for new or renovated landscapes and promotes water-efficient design.

Next Steps

City staff continues to pursue funding sources to support turf conversions. For municipal facilities, staff is working to develop a resource reinvestment fund, in which a portion of utility savings from energy and water retrofit projects can be reinvested in similar projects. In the community, City staff plans to release a Request for Proposals to pursue a residential-focused Property Assessed Clean Energy (PACE) program to help finance turf retrofits.

CLIMATE ADAPTATION STRATEGIES

The following (11) strategies are designed to reduce Chula Vista's future risks and costs from expected climate change impacts such as sea level rise, more frequent wildfires and extreme heat days, and increased stress on energy and water supplies. The measures complement one another as well as state and federal climate adaptation initiatives.

ADAPTATION STRATEGY #1
COOL PAVING

Overview

To address climate change impacts related to the urban heat island effect (hotter ambient air temperatures), Strategy #1 is intended to incorporate reflective (or "cool paving") into all municipal projects (parking lots and streets) and new private parking lot projects over a specific size. Cool pavements refer to a range of established and emerging paving materials, which store less heat and have lower surface temperatures compared with conventional products. Specifically, the strategy's components include performing a comprehensive study to evaluate and test multiple reflective pavement technologies and developing options (based on the study's results) for incorporating cool pavement technologies into municipal standards.

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #1: Cool Paving	1	Conduct a "cool paving" study to evaluate options	Completed	A final Cool Pavement Report has been completed by external consultants and presented to City Council.
	2	Develop formal standards for incorporating "cool paving" into municipal and development projects	In Progress	Dependent on the outcome of component #1, staff will present recommendations to City Council for consideration.

Next Steps

Although Chula Vista was not successful in securing grant funding for a cool paving demonstration site at Greg Rogers Park, the City will continue to pursue possible funding sources. The City will also be piloting some modifications to existing pavement treatments to improve their "coolness" as recommended in the recently-completed Cool Pavement Report. Staff plans to return to City Council in the next 2 years with a formal policy for consideration.

ADAPTATION STRATEGY #2
SHADE TREES

Overview

To address climate change impacts related to the urban heat island effect and energy demand, Strategy #2 is intended to incorporate shade trees into all municipal improvement projects and all private development parking lot projects. Shade trees contributing to a robust urban forest act as a natural cooling mechanism for urban areas. In addition, canopy-forming trees help reduce storm water runoff, provide habitat for wildlife, and increase property values. Specifically, the strategy's components include (1) developing a shade tree policy for future City Council consideration, (2) amending the Municipal Landscape Manual to be consistent with the new policy, and (3) ensuring that the recently-updated Design Manual is consistent with the new policy.

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #2: Shade Trees	1	Develop a formal shade tree policy	Completed	A new City Council policy promoting the use of shade trees along streets and within municipal and private parkling lots was approved in May 2012.
	2	Amend the Municipal Landscape Manual to be consistent with the new shade tree policy	In Progress	Based on the outcome of component #1, the Municipal Landscape Manual will be revised, as appropriate.
	3	Ensure that the Design Manual is consistent with the new shade tree policy	Completed	As part of the new Council-approved Design Manual, new development projects must incorporate shade trees and provide at least 50% shade coverage for paved areas.

Next Steps

Since a formal Shade Tree policy has now been adopted by City Council, staff expects to complete complementary updates to the Municipal Landscape Manual by spring 2014, as part of a more comprehensive revision process.

ADAPTATION STRATEGY #3
COOL ROOFS

Overview

Strategy #3 is intended to address climate change impacts related to the urban heat island effect and energy demand by promoting "cool roofs." Cool roofs, which are made of highly reflective and emissive material, can remain approximately 50 to 60°F cooler compared to traditional materials, thus helping to lower ambient temperatures inside and outside of buildings. This creates a more comfortable and healthy environment for building occupants and reduces energy use for air-conditioning. To accomplish Strategy #3, City staff will further evaluate cool roofing options and propose amendments to the municipal building codes for City Council consideration.

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #3: Cool Roofs	1	Conduct a "cool roof" study to evaluate options	Completed	With the assistance of SDG&E, staff has completed a cost-benefit analysis of cool roof options, which was used to inform proposed building code revisions (component #2).
	2	Develop standards for incorporating "cool roofs" into building codes	Completed	Since City Council adoption in March 2012, the City has issued 17 new residential building permits that need to meet the new standards.

Next Steps

The City will continue to implement its new cool roof requirements under the City's broader green building standards. Local amendments to building codes expire when new California building codes take effect. As such, staff will evaluate the 2013 California Green Building Standards Code and propose local amendments for City Council consideration prior to the new statewide standards beginning in January 1, 2014.

ADAPTATION STRATEGY #4
LOCAL WATER SUPPLY & REUSE

Overview

Expected climate change impacts could limit imported water availability, increase utility costs for residents and businesses, and lead to higher demand for local water sources. As such, Strategy #4 is intended to educate the community about the benefits and appropriate uses of local water supplies and further integrate recycled water/onsite water reuse systems into new development. Specifically, components include (1) evaluating municipal building code options to incorporate single-source graywater "stub-outs" in new residential buildings and indoor recycled water in new commercial buildings, (2) developing an educational guide about proper graywater use, (3) creating an incentive (using external funding sources) to promote onsite water reuse, and (4) updating the City's water-related plans to reference and promote recycled water and onsite water reuse systems.

CLIMATE ADAPTATION Strategy #4: Local Water Supply & Reuse	#	COMPONENTS	STATUS	PROGRESS
	1	Develop standards for incorporating graywater stub-outs (residential) and indoor recycled water use (commercial)	In Progress	Staff has begun to present a draft graywater stub-out ordinance to the Development Services Oversight Committee, the Board of Appeals & Advisors, and the Resource Conservation Commission.
	2	Develop a graywater educational guide to help ensure proper use	In Progress	Based on the outcome of component #1, an educational guide will be created to promote the proper use of graywater and other onsite water reuse options (such as rain harvesting).
	3	Create an onsite water reuse incentive program	In Progress	A framework for an onsite water reuse incentive program has been developed and is being used to solicit external funding sources for support.
	4	Update water-related municipal guidelines & plans to promote graywater	In Progress	Based on the outcome of component #1, municipal guidelines will be updated to be consistent with new graywater and other water reuse policies.

Next Steps

Staff expects to present a graywater stub-out ordinance and related installation guidelines to City Council for consideration by January 2013. Because indoor use of recycled water is a more complex issue, a draft standard for commercial buildings will be pursued after a stub-out standard is finalized.

ADAPTATION STRATEGY #5
STORM WATER POLLUTION PREVENTION & REUSE

Overview

Climate change will likely alter regional precipitation patterns, thus altering water runoff and sediment movement flows through local watersheds. Because of urbanization and its associated activities, pollutants are discharged with these flows into the City's storm drainage systems, creeks, rivers, San Diego Bay, and the ocean and reduce the beneficial uses of these water bodies for the Chula Vista community. Strategy #5 is intended to revise the City's storm water regulations and applicable municipal codes to efficiently manage higher concentrations of pollutants in urban runoff by minimizing water waste, using natural landscapes to help drain or reuse runoff, and by ensuring that irrigations systems are properly installed and maintained.

CLIMATE ADAPTATION Strategy #5: Storm Water Pollution Prevention & Reuse	#	COMPONENTS	STATUS	PROGRESS
	1	Develop revisions to the municipal code to prohibit excessive landscape over-irrigation resulting in urban runoff	Completed	Code revisions were adopted by City Council at their November 20, 2012 meeting.
	2	Encourage the beneficial reuse of pipe flushing water at construction sites	In Progress	After extensive research, a guidance brochure is currently in development and is expected to be completed by December 2012.
	3	Develop incentives promoting Low Impact Development (LID) design concepts	In Progress	Draft non-monetary incentives to incorporate LID features into development projects are being created for City Council consideration by February 2013.
	4	Conduct a feasibility study for the beneficial reuse of dry weather flow sources	In Progress	Potential external funding sources for a dry-weather water reuse project at Hilltop Park (or similar type projects) are being explored.

Next Steps

For component #4, staff will further develop the Hilltop Park Storm Water Reuse Project over the next 6 months and seek funding support, as appropriate.

ADAPTATION STRATEGIES #6 & #7
EDUCATION & WILDFIRES
EXTREME HEAT PLANS

Overview

The frequency and intensity of wildfires and extreme heat events is expected to increase due to local climate change impacts. These events could lead to greater public safety (loss of life and property) and health concerns (poor air quality and infectious disease transmittal). The strategies are designed to educate the general public and the business community about the impacts of climate change using existing City and community partner outreach mechanisms with a special emphasis on making homes more resilient to wildfires, incorporating poor air quality day notifications, and educating businesses about employee heat illness risks. In addition, extreme heat events will be added as a significant emergency to the City's public safety plans with a special emphasis on serving vulnerable populations and supporting a robust network of energy-secured "Cooling Centers."

CLIMATE ADAPTATION Strategy #6: Education & Wildfires Strategy #7: Extreme Heat Plans	#	COMPONENTS	STATUS	PROGRESS
	1	Expand community wildfire education	Ongoing	The City launched its new "Ready, Set, GO!" campaign, which is a comprehensive outreach program designed to promote wildifre prevention & preparedness.
	2	Revise emergency plans to include extreme heat events	In Progress	The City will be revising its Emergency Operations Plan by December 2012 and its section of the Multi-Jurisdictional Hazard Mitigation Plan in 2015, as appropriate.
	3	Establish a procedure for notifying the community about poor air quality & extreme heat days	Completed	City staff now receives and forwards air quality notifications from the San Diego County Air Pollution Control District through the City's Nixle community messaging system.

Next Steps

City staff will continue to implement its community education and notification programs related to wildfires and extreme heat days. Staff has begun the revision process for the Emergency Operations Plan and expects to finalize the plan in December 2012. The Multi-Jurisdictional Hazard Mitigation Plan will be revised to include extreme heat events, as part of its regularly-scheduled update in 2 years.

ADAPTATION STRATEGY #8
OPEN SPACE MANAGEMENT

Overview

Chula Vista's open space areas include landscaped areas within developments, parks and recreation areas, and open space that has been set aside as a preserve for sensitive biological resources. In order to assess and reduce impacts associated with climate change on parks and open space and their associated ecosystems, Strategy #8 is intended to seek opportunities for the City to partner with the Resource Agencies, non-profit organizations, and/or adjacent public land managers to monitor and manage/restore ecosystems to ensure long-term habitat connectivity, species resilience, and community recreational opportunities.

	#	COMPONENTS	STATUS	PROGRESS
CLIMATE ADAPTATION Strategy #8: Open Space Management	1	Integrate climate change-related biological monitoring into Otay Ranch Preserve's Management Plan & Annual Work Plans	On-Hold	Staff has included climate change-related monitoring into the FY2013 Work Plan, but funding for Management Plan amendments & implementation is still being pursued.
	2	Update the Otay Valley Regional Park (OVRP) Concept Plan to incorporate climate-resilient design & educational guidelines	In Progress	The City will be notified by the end of fall 2012 about its grant proposal to further develop park trails (east of 805), which will integrate climate-resilient design and educational concepts.
	3	Convert landscaped areas in open space districts to water-saving plants, mulch, & irrigation sytems	Ongoing	Two open space slopes (260,000 sf total) in the East Lake Woods area were recently re-landscaped with drought tolerant plants and efficient irrigation systems.

Next Steps

If the OVRP is awarded the park trails grant, the City and its partners will implement the project's design and environmental review work over the next 12 months. Staff will also continue coordinating with its regional partners to finalize the proposed Concept Plan amendments, which integrate climate change impacts and vulnerabilities, by spring 2013.

ADAPTATION STRATEGY #9
WETLANDS PRESERVATION

Overview

Expected local climate change impacts include precipitation variability and sea level rise that will stress riparian wetlands and estuarine wetlands, respectively. As a result, the locations where the temperature, moisture, and other environmental conditions are suitable for wetlands and their associated species will shift. In order to reduce these impacts, Strategy #9 is intended to ensure that, when preserving or restoring coastal and riparian wetland, the City take steps to incorporate adequate upland or transition habitats to accommodate shifts in wetlands coverage and help ensure public access due to sea level rise and other climate change impacts. Specifically, components include (1) evaluating the feasibility of monitoring local wetlands species ranges and abundances in response to climate change impacts, (2) incorporate wetlands "migration" in habitat management and restoration design criteria in the future Bayfront Natural Resources Management Plan (NRMP), and (3) revise the OVRP Habitat Restoration Plan and Non-native Plant Removal Guidelines to include strategies for climate change adaptation issues.

CLIMATE ADAPTATION Strategy #9: Wetlands Preservation	#	COMPONENTS	STATUS	PROGRESS
	1	Evaluate potential to monitor local wetlands' biological health to assess climate change impacts	On-Hold	Staff, in coordination with its partners, is seeking funding to support biological wetlands monitoring.
	2	Incorporate climate change & sea level rise concepts in Bayfront NRMP	In Progress	Staff has begun preliminary work on the NRMP with the Bayfront Wildlife Advisory Group, who has identified climate change and sea level rise as critical components to the planning process.
	3	Amend OVRP Habitat Restoration & Non-Native Plant Removal Plans to promote climate resiliency	In Progress	City has begun discussions with partners on proposed OVRP plans' amendments.

Next Steps

Staff will continue to work with the Port of San Diego and the Bayfront Wildlife Advisory Group to include climate change-related issues into the NRMP development process. The City will also continue working with its OVRP partners in order to finalize the proposed climate change-related amendments to the Habitat Restoration Plan and Non-Native Plant Removal Plan by spring 2013.

ADAPTATION STRATEGY #10
SEA LEVEL RISE & LAND DEVELOPMENT CODES

Overview

Over the next 40 years, sea level rise rates are expected to increase with local sea levels 12 to 18 inches higher than their current levels. Higher sea levels can result in increased erosion, more frequent flooding and property damage, loss of wetland habitats, and fewer waterfront public access options. As such, Strategy #10 directs the City to amend its land development codes and CEQA guidelines to incorporate climate change-related sea level rise into future development and municipal infrastructure projects' design and review. Specifically, the components include (1) revising the grading ordinance to consider a project's vulnerability to future sea level rise and flooding events, (2) modifying the Subdivision Manual to ensure that storm water/drainage infrastructure can address future sea level rise and flooding impacts, and (3) ensuring that environmental review and CEQA procedures are consistent with these changes.

CLIMATE ADAPTATION Strategy #10: Sea Level Rise & Land Development Codes	#	COMPONENTS	STATUS	PROGRESS
	1	Revise the grading ordinance to address increased rates of sea level rise	Completed	An ordinance revising Municipal Code 15.04 was adopted by City Council to address coastal development and sea level rise concerns.
	2	Modify Subdivision Manual to ensure proper drainage with higher sea levels	Completed	In March 2012, City Council approved revisions to the Subdivision Manual, which require 16" of sea level rise to be used for evaluating projects within tidally influenced areas.
	3	Ensure CEQA review procedures are consistent with new sea level-related land development guidelines	Completed	The new sea level rise requirements (components #1 & #2) have been incorporated into the environmental document preparation process.

Next Steps

At this time, the Governor's Office of Planning and Research (OPR) has not provided additional guidance on sea level rise issues under CEQA. However, OPR expects to begin updating the statewide CEQA Guidelines for sea level rise impacts next year. As such, City staff will continue to monitor the development of statewide CEQA Guidelines to ensure that Chula Vista is consistent with any new requirements.

ADAPTATION STRATEGY #11
GREEN ECONOMY

Overview

Climate change impacts create new issues that local communities and, in particular, businesses need to address and prepare for in order to reduce future risks and costs. These issues can include higher insurance premiums due to greater flooding or wildfire risks, more expensive utility costs due to higher energy and water demand, and lower productivity due to more employee sick days from frequent extreme heat and poor air quality days. As such, Strategy #11 is designed to provide assistance and non-monetary incentives to help businesses manage climate change risks and to attract businesses that provide "green" products or services into Chula Vista. Specifically, the components include (1) revising the municipal purchasing policy to more robustly promote the procurement of "green" products and services, especially from local Chula Vista businesses, (2) revising existing business outreach programs to include recommendations on how they can reduce future climate change risks, and (3) continuing the recruitment and retention of "green" businesses and manufacturers in Chula Vista.

CLIMATE ADAPTATION Strategy #11: Green Economy	#	COMPONENTS	STATUS	PROGRESS
	1	Revise "green" procurement policy & process	In Progress	Training sessions on "green" products and procurement were held for purchasing liaisons in each department.
	2	Modify business outreach programs to include information on reducing climate change risks	Completed	Both the CLEAN Business and FREBE checklists have been updated to include info on business-related climate adaptation strategies.
	3	Continue recruiting & retaining "green" businesses	Ongoing	Over 140 Chula Vista businesses have been recognized through the CLEAN Business program in partnership with the Chamber of Commerce and Third Ave Village Association.

Next Steps

In January 2013, the City's solicitation for a new office supply vendor will include requirements for the availability of "green" products. In addition, the Economic Development Division will be completing by January 2013 a business recruitment study, which includes an analysis of how to better attract and retain clean technology-oriented companies.